ABSTRACT OF THE DISCLOSURE

A method of the present invention includes the steps of forming an amorphous semiconductor layer on an insulative surface, adding a catalyst element capable of promoting crystallization to the amorphous semiconductor layer and then performing a first heat treatment so as to crystallize the amorphous semiconductor layer, thereby obtaining a crystalline semiconductor layer, performing a first gettering process to remove the catalyst element from the semiconductor layer, and performing a second gettering process that is different from the first gettering process to remove the catalyst element from the semiconductor layer. The first gettering process includes removing at least large masses of a semiconductor compound of the catalyst element present in the crystalline semiconductor layer. The second gettering process includes moving at least a portion of the catalyst element remaining in the crystalline semiconductor layer so as to form a low-catalyst-concentration region in the crystalline semiconductor layer, the low-catalyst-concentration region having a lower catalyst element concentration than in other regions.